

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of communicating between a source and a target node in a clustered computer system, the method comprising:

establishing a cluster data port between the source node and a target node, the cluster data port configured to select among a plurality of connection paths between the source node and the target node, and to selectively switch over data flow from the target node to a backup target node, wherein establishing the cluster data port includes establishing multiple concurrent logical connections between the source node and the target node, each logical connection configured to communicate data over a connection path among the plurality of connection paths; and

communicating data from the source node to the target node using the cluster data port.

2. (Canceled).

3. (Currently Amended) The method of claim 1 2, wherein establishing the cluster data port includes exchanging between the source and target nodes network addresses associated with at least one of the source and target nodes.

4. (Currently Amended) The method of claim 1 2, wherein establishing the cluster data port includes registering a client that is resident on the source node with the cluster data port.

5. (Original) The method of claim 4, wherein registering the client comprises identifying to the data cluster port at least one callback function associated with the client,

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wherein the cluster data port is configured to notify the client of a data port event by calling the callback function.

6. (Original) The method of claim 1, wherein communicating data from the source node to the target node includes performing load balancing in the cluster data port to distribute the data among the plurality of connection paths.

7. (Currently Amended) The method of claim 1, wherein each logical connection path comprises a TCP connection.

8. (Original) The method of claim 1, wherein the cluster data port is configured to communicate data between the source and target nodes according to a messaging protocol selected from the group consisting of an asynchronous messaging protocol and a synchronous messaging protocol.

9. (Original) The method of claim 1, further comprising, with the cluster data port, switching data flow from the target node to a backup target node in response to an inability to communicate with the target node.

10. (Original) The method of claim 9, wherein switching data flow from the target node to the backup target node includes establishing a logical connection between the source node and the backup target node.

11. (Original) The method of claim 9, further comprising notifying a client of the cluster data port service of the inability to communicate with the target node, wherein switching data flow from the target node to a backup node is performed in response to initiation of a cluster data port failover by the client.

12. (Original) The method of claim 9, wherein switching data flow from the target node to a backup node is initiated by the cluster data port.

13. (Original) The method of claim 1, further comprising, with the cluster data port, resetting a logical connection between the source node and the target node in response to an inability to communicate with the target node.

14. (Original) The method of claim 1, further comprising communicating data from the target node to the source node using the cluster data port.

15. (Original) The method of claim 1, wherein the target node is remote from the source node, and wherein communicating data from the source node to the target node includes communicating mirror data to support remote mirroring between the source and target nodes.

16. (Currently Amended) An apparatus, comprising:

a memory;

at least one processor; and

program code resident in the memory and configured for execution on the at least one processor to implement a cluster data port for a clustered computer system of the type including a plurality of nodes, the cluster data port configured to support communication between a source node and a target node among the plurality of nodes, the cluster data port further configured to select among a plurality of connection paths between the source node and the target node, and to selectively switch over data flow from the target node to a backup target node, wherein the cluster data port is configured to establish multiple concurrent logical connections between the source node and the target node, each logical connection configured to communicate data over a connection path among the plurality of connection paths.

17. (Canceled).

18. (Currently Amended) The apparatus of claim 16 ~~17~~, wherein the cluster data port is configured to exchange between the source and target nodes network addresses associated with at least one of the source and target nodes.

19. (Currently Amended) The apparatus of claim 16 ~~17~~, wherein the cluster data port is configured to register a client that is resident on the source node.

20. (Original) The apparatus of claim 19, wherein the cluster data port is configured to receive from the client at least one callback function associated with the client during registration of the client, wherein the cluster data port is configured to notify the client of a data port event by calling the callback function.

21. (Original) The apparatus of claim 16, wherein the cluster data port is configured to load balance data communicated between the source and target nodes to distribute the data among the plurality of connection paths.

22. (Currently Amended) The apparatus of claim 16, wherein each logical connection ~~path~~ comprises a TCP connection.

23. (Original) The apparatus of claim 16, wherein the cluster data port is configured to communicate data between the source and target nodes according to a messaging protocol selected from the group consisting of an asynchronous messaging protocol and a synchronous messaging protocol.

24. (Original) The apparatus of claim 16, wherein the cluster data port is configured to switch data flow from the target node to a backup target node in response to an inability to communicate with the target node.

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25. (Original) The apparatus of claim 24, wherein the cluster data port is configured to switch data flow from the target node to the backup target node by establishing a logical connection between the source node and the backup target node.

26. (Original) The apparatus of claim 24, wherein the cluster data port is further configured to notify a client of the cluster data port of the inability to communicate with the target node, and wherein the cluster data port is configured to switch data flow from the target node to a backup node in response to initiation of a cluster data port failover by the client.

27. (Original) The apparatus of claim 24, wherein the cluster data port is configured to initiate the switch of data flow from the target node to a backup node.

28. (Original) The apparatus of claim 16, wherein the cluster data port is configured to reset a logical connection between the source node and the target node in response to an inability to communicate with the target node.

29. (Original) The apparatus of claim 16, wherein the cluster data port is configured to support bidirectional communication between the source and target nodes.

30. (Original) The apparatus of claim 16, wherein the target node is remote from the source node, and wherein the cluster data port is configured to communicate mirror data from the source node to the target node to support remote mirroring between the source and target nodes.

31. (Currently Amended) A clustered computer system, comprising:
a plurality of nodes; and
a cluster data port resident on at least one of the plurality of nodes and configured to support communication between a source node and a target node

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among the plurality of nodes, the cluster data port configured to select among a plurality of connection paths between the source node and the target node, and to selectively switch over data flow from the target node to a backup target node, wherein the cluster data port is configured to establish multiple concurrent logical connections between the source node and the target node, each logical connection configured to communicate data over a connection path among the plurality of connection paths.

32. (Original) The clustered computer system of claim 31, wherein the cluster data port is configured to select among the plurality of connection paths using a load balancing algorithm.

33. (Original) The clustered computer system of claim 31, wherein the cluster data port is configured to switch over data flow from the target node to the backup target node in response to an inability of the source node to communicate with the target node.

34. (Original) The clustered computer system of claim 31, wherein the target node is remote from the source node, and wherein the cluster data port is configured to communicate mirror data from the source node to the target node to support remote mirroring between the source and target nodes.

35. (Currently Amended) A program product, comprising:

program code configured to implement a cluster data port for a clustered computer system of the type including a plurality of nodes, the cluster data port configured to support communication between a source node and a target node among the plurality of nodes, the cluster data port further configured to select among a plurality of connection paths between the source node and the target node, and to selectively switch over data flow from the target node to a backup target node, wherein the cluster data port is configured to establish multiple

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concurrent logical connections between the source node and the target node, each logical connection configured to communicate data over a connection path among the plurality of connection paths; and

a signal bearing medium bearing the program code.

36. (Original) The program product of claim 35, wherein the signal bearing medium includes at least one of a recordable and a transmission medium.